XNET Network Dome Camera(IVC5055VR)

Installation Guide

Ver. 1.0

About this Manual

A compatibility and durability test ensured this product's high performance.

This manual is for XNET IP Dome Camera users only, and it describes operations related to XNET IP Dome Camera.

Please read this manual thoroughly paying attention to cautions and warnings before using the product even if you have used similar products before.

Important Notices

The copyright of this manual is owned by CNB Technology Inc.
It is illegal to copy and distribute this manual without permission.
Damages caused by use of parts not recommended and by misuse will not be applicable for support.
Contact the store or the manufacturer immediately if (you think) there is any problem with the product.
Contact the store or the manufacturer before disassembling the product for alteration or repair.
XNET is a trademark of CNB Technology Inc.
This product complies for CE (Europe) and FCC (USA) regulations for industrial/home use electrical device.

INFORMATION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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1. About XNET

1.1. About XNET

XNET is an internet based security and surveillance system that is compatible with various network conditions through easy installation and user interface as well as multi-functional compressor Codec such as H.264, MJPEG. XNET provides stable real-time surveillance by real time video/ audio at 1080P level, local storage for any network problems, and hybrid IP technology that can be used with existing analog CCTV devices.

1.2. Features of XNET

- Most advanced Video compression technology (H.264/MJPEG)
- Progressive technology - Progressive scan makes the image sharp and clear without ghost effect.
- Hybrid IP Technology - CCTV analog video output can be used for existing analog CCTV devices.
- Transmission of Multi-Codec stream - Live video signal can be compressed to H.264 or MJPEG and sent to meet various applications of network or user.
- 2-way Audio Communication (Bi-directional voice communication between Client's PC and XNET)
- Smart Event feature - On the top of motion detection and sensor/alarm feature, pre- and post- alarm feature allows automated surveillance without an attendant's monitoring.
- Install/ Operation Wizard - Install/ Operation Wizard not only makes it easy for installers and users, but also offers a unified installation setup for massive scale installations.
- Up to 3 motion detection areas
  and Video data transmission to FTP site or e-mail upon detecting a motion.
- Supports Various resolutions - 1080P(1920x1080), SXGA(1280x1024), 720P(1280x720), D1(720x480), VGA(640x480), CIF(320x240)
- Remote Control over the network for software upgrade

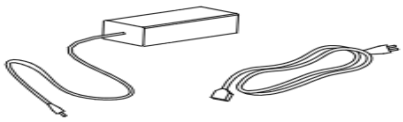
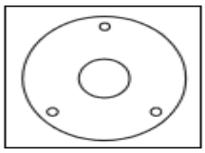
1.3. Applications

- Surveillance (Building, store, factory, parking lot, financial institutions, government buildings, military facilities, etc.)
- Remote video monitoring (Hospital, kindergarten, traffic monitoring, remote branch office, weather, environment preservation, and illegal disposal of trash, etc.)
- Real time broadcasting over the internet (Resort facility, parties, festivals, etc), remote business meetings, and educational trainings, etc.

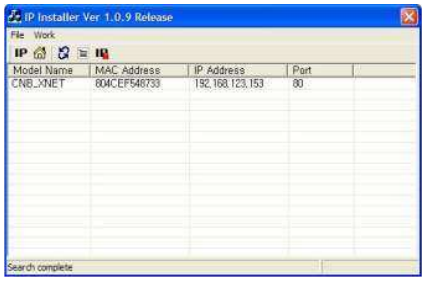
2. About the Product

2.1. Contents

Please make sure the following contents are included when you open the package.

Contents	Description	Additional info.
XNET	XNET IP Dome Camera	
POWER ADAPTOR AC Power Cable	INPUT : 100~240VAC 50-60Hz OUTPUT : 12VDC 2A AC24V 2.5A 2Jack Cable	
GUIDE PATTERN	Guide Pattern	
CD	Software and User's manual	
DC JACK	Connect the Power Adaptor DC jack	
Accessory	SCREW 3EA, Wall Anchors 3EA L (wrench) 1EA	

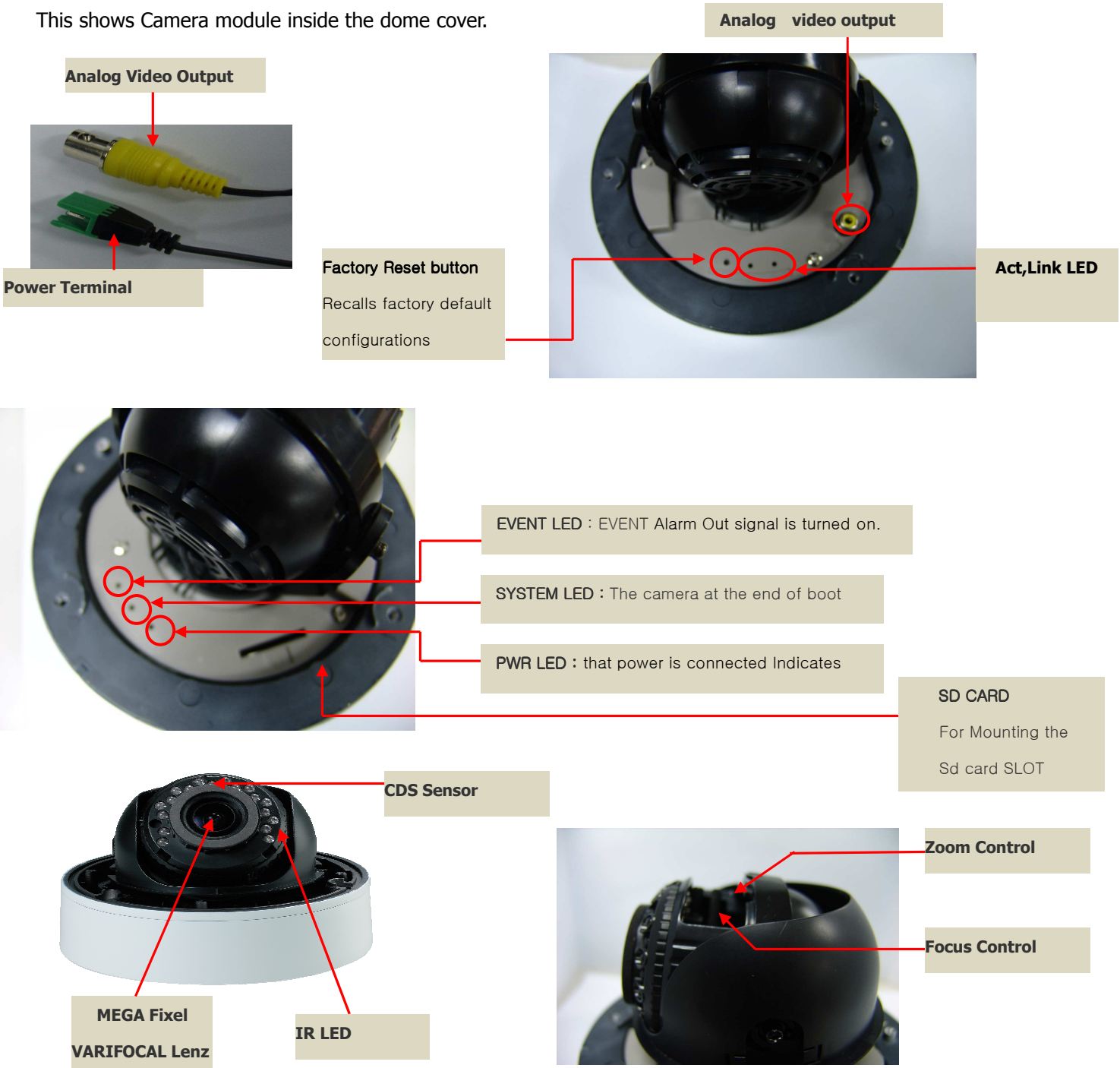
2.2. Product Information

XNET (IVC5055VR)	Install CD	
	IP-Installer	Viewer Program (CNB-CMS)
	 IP Installer Ver 1.0.9 Release File Work Model Name MAC Address IP Address Port CNB_XNET 804CEF548733 192.168.123.153 80 Search complete	
IP Dome Camera (IVC5055VR)	A software that assigns an IP address to the product	A software that monitors and records Audio and Video signal from the device

2.3. Hardware Designation

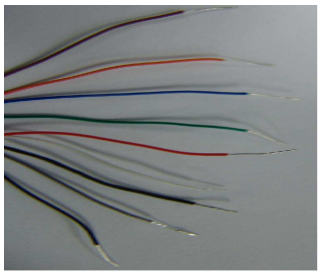
2.3.1. Switch and Controls

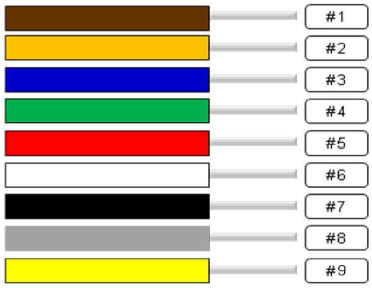
This shows Camera module inside the dome cover.


Analog video output
Analog Video Output
Power Terminal
Factory Reset button
Recalls factory default configurations
Act,Link LED
EVENT LED : EVENT Alarm Out signal is turned on.
SYSTEM LED : The camera at the end of boot
PWR LED : that power is connected Indicates
SD CARD
For Mounting the Sd card SLOT
CDS Sensor
MEGA Fixel VARIFOCAL Lenz
IR LED
Zoom Control
Focus Control

- STATUS LED
  - PWR LED : Red light indicates that 12V DC power is connected.
  - EVENT LED : Green light indicates that Alarm Out signal is turned on.
  - SYSTEM LED : The system operates normally when the Green LED blinks
  - LINK LED : Red light indicates that the network is properly connected.
  - ACT LED : Green light indicates that the XNET system connected to 100Mbps LAN. This green lamp will blink If the system receives data.

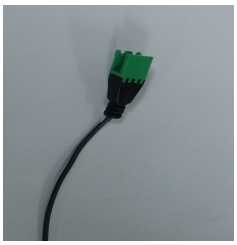
2.3.2 Connecting Cables





	LINE COLOR	FUNCTION
1	BROWN	Alarm-Out(+)
2	ORANGE	Alarm-Out(-)
3	BLUE	Alarm-In(+)
4	GREEN	Alarm-In(-)
5	RED	MIC/Line-in
6	WHITE	Line-Out
7	BLACK	GND
8	GRAY	Not Used
9	YELLOW	Not Used

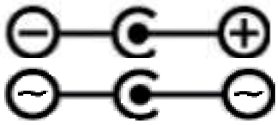
- **Power Input(#1, #2)**



Use the cable adapter(DC12V JACK) in the package to connect power.

Please use the accessory power supply provided in the package.

Except when connected to AC24V DC jack please use(DC12V/2A,AC24V 2.5A)



- **Analog Video Output**

Use this output for immediate monitoring of the video during installation.

Use the supplied cable adapter

(Yellow for video and White for Video Ground GND)

This adapter can be connected to a cable through a BNC terminal Output connector.

(Select Video Out at menu screen to enable this output)

- **Audio Connection**

MIC/Line Input (Mono)

Connects to auxiliary Audio device or microphone.

Line Output (Mono)

Audio signal output to a Power Amplified device or Speaker. This can be used to listen to the audio signal sent from a remote PC for Bi-directional Audio communication.

- **Alarm Connection**

These wires connect to Alarm input/output devices.

- Alarm Sensor Input: Connect to Alarm sensor devices such as IR Sensor or Heat sensor. These can be configured to normally close or normally open operation. **(#1, #2)**
- Alarm Output: Connect to Alarm devices such as Relay operated Siren Lamp or Alarm Light. These can be configured to normally close or normally open operation. **(#3, #4)**
- Please refer to **"2.3.3 Connection to Alarm Devices"** for detailed instruction on how to connect sensors and Relays.

Do not use this connector when powering up the product through LAN cable. (PoE) The product is not covered under warranty when it is damaged by connecting both Ethernet power and 12V DC power to this terminal.

- **Factory Reset**

Press and hold for more than 3 seconds while power is on to recall factory default settings

- **Network Cable**

This Ethernet terminal connects to 100Mbps LAN through an RJ-45 cable. When optional PoE is used, the power will be supplied from the Network Cable. Network cable of this product is not water proof

- **SD CARD SLOT** : Enables recording of video data to an external memory device upon occurrence of an event. Please use less than 16 GB SD Memory.

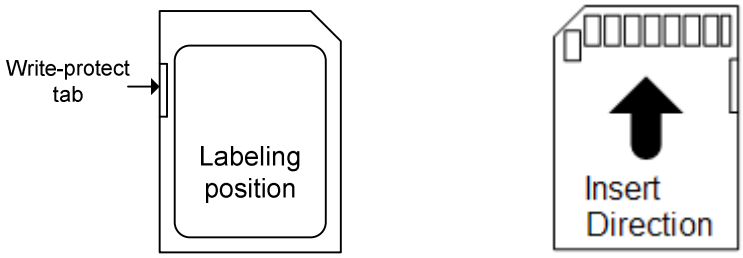


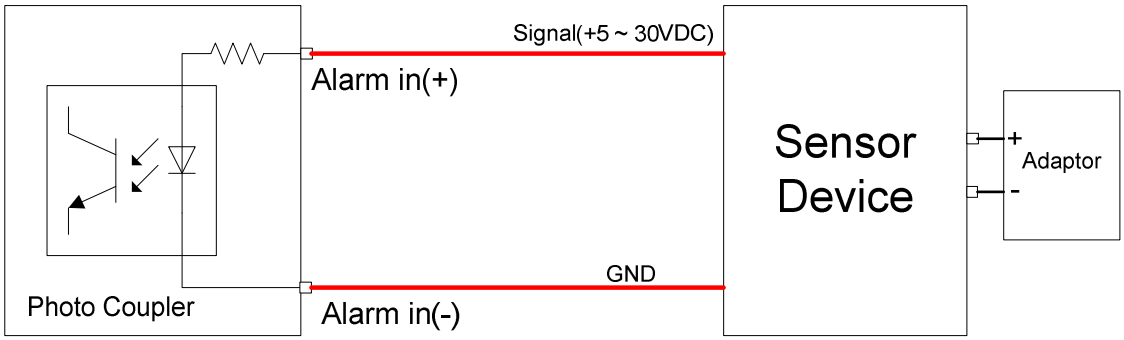
Figure 2-3. SD CARD

2.3.3 Connecting to Alarm Devices

- **Alarm Input**

Wires from various sensor type (IR, heat, and magnetic) can be connected to **Alarm** in(+)/(-) terminal as shown in figure 2.5. (NC or NO of sensor input can be selected at Menu screen.)

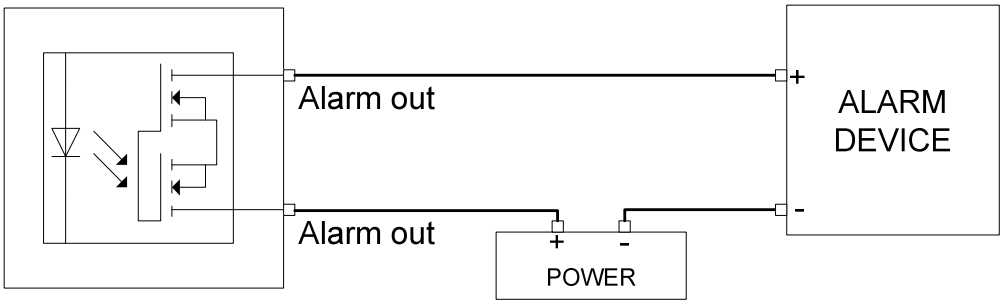
Alarm Sensor device requires a separate power source.



Internal Circuitry External Circuitry

- **Alarm Output**

This terminal can only be connected up to DC 30V/400mA. An additional relay device has to be used to control higher voltage or current.



Internal Circuitry External Circuitry

3. Software Installation

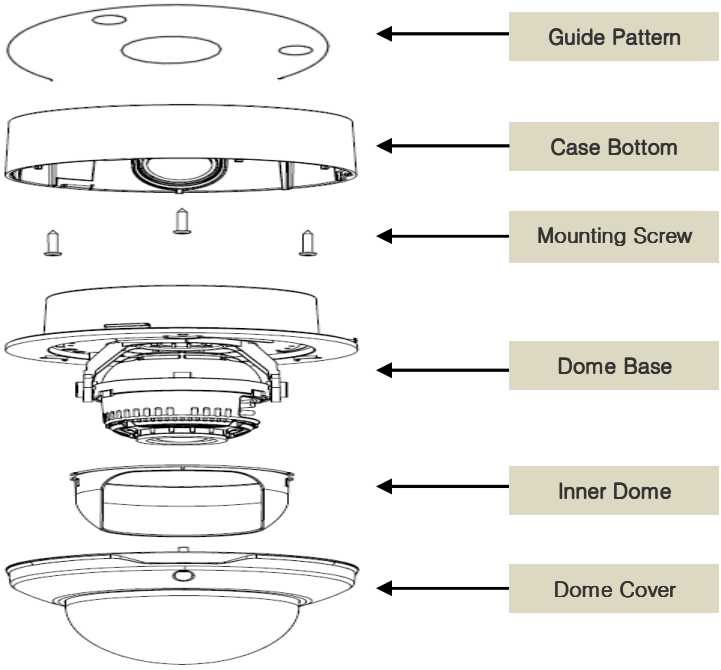
This section provides brief guidelines to install the XNET quickly and to monitor XNET's Video and Audio signals easily. If you have questions about details not explained in this section or if the product is not functioning as described, please refer to FAQ before contacting the store.

Our homepage is ***http://www.cnbtec.com***.

3.1. Installing XNET

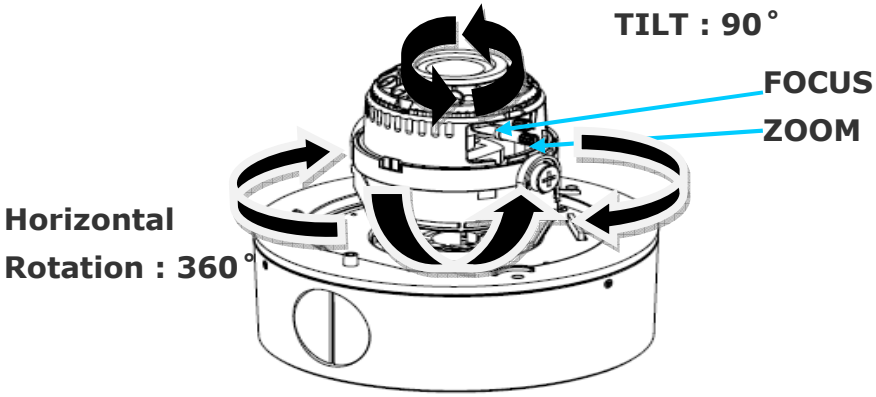
3.1.1. Installation

Mount the Camera to a ceiling or a wall. Make sure the base is firm enough to hold the Camera.



IVC5055VR Model

Adjust the position, zoom, and focus as shown below:

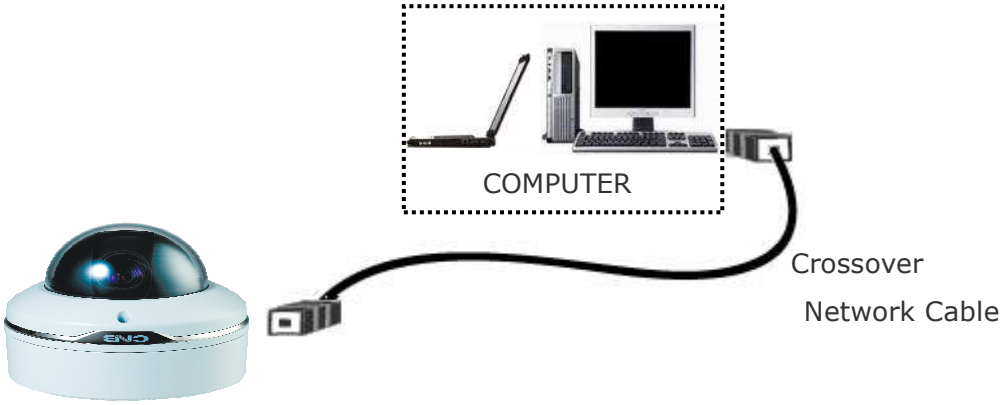


1.1.2. Cable Connection

- **Connect XNET to PC directly**

User can monitor and configure XNET camera by connecting it to your PC directly.

A. Connect XNET camera to your PC directly using a LAN cable like below.

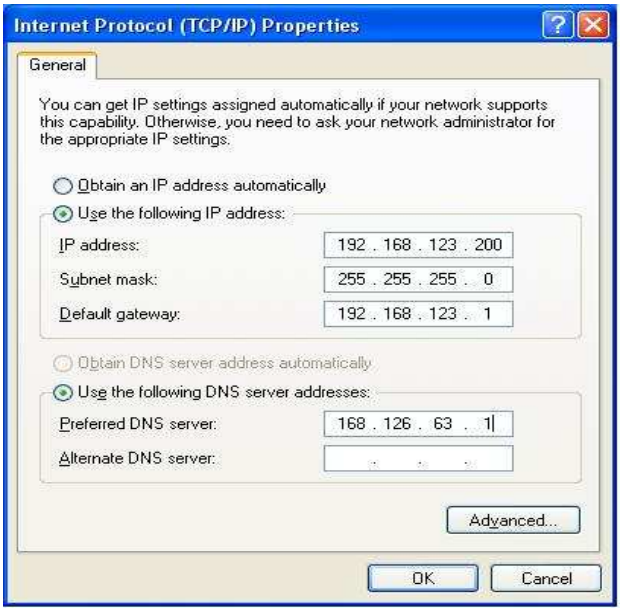


NOTE: XNET camera's IP address will be automatically set to the default value, 192.168.123.100, after connecting XNET camera to your PC directly.
(This process approximately takes 20~30 seconds)

B. Please follow the direction to modify PC's network configuration.

Windows Start → Control Panel → Network Connections → Right-clicks on the Local Area Connection icon → Double click on the Internet Protocol (TCP/IP) icon.

Please set PC's network configuration like below.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 123 . 200
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 123 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 168 . 126 . 63 . 1
Alternate DNS server:
Advanced...
OK
Cancel

NOTE: IP address for PC can be set from 192.168.123.2 to 192.168.123.254. Since XNET camera's IP address is already set to 192.168.123.100, you cannot allocate this IP address to PC.

C. Please insert the Setup CD into your CD-ROM drive, and then please setup IPInstaller program.

D. Please click 'Next' button when the Setup screen appear.

XNET IPInstaller - InstallShield Wizard
Welcome to the InstallShield Wizard for XNET IPInstaller
The InstallShield® Wizard will install XNET IPInstaller on your computer. To continue, click Next.
< Back
Next >
Cancel

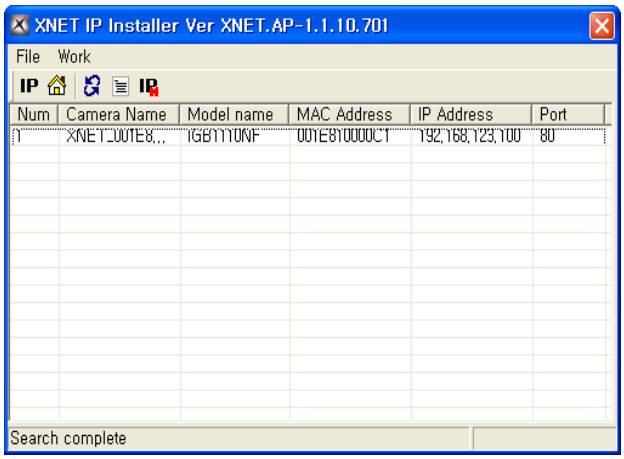
E. Please click 'Install' button to begin the Installation.

XNET IPInstaller - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

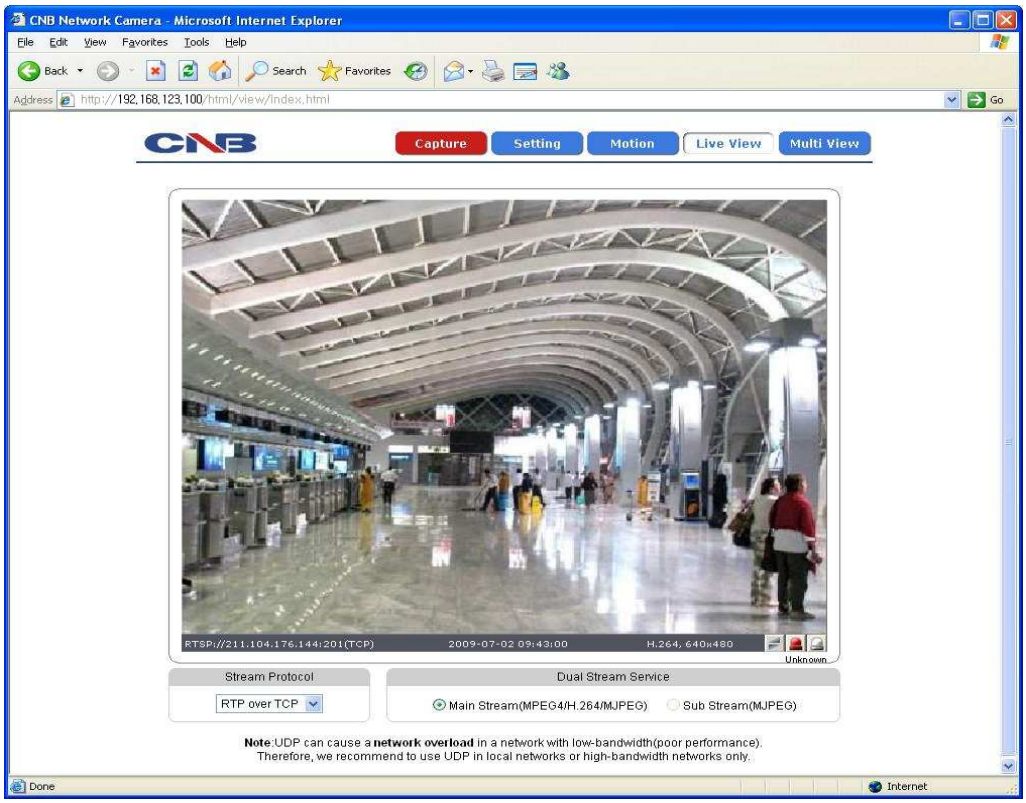
F. Please click 'Finish' button to complete the installation.

XNET IPInstaller - InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed XNET IPInstaller. Click Finish to exit the wizard.
< Back
Finish
Cancel

G. XNET IP Installer program is automatically launched like below right after the program installation. Please double click XNET camera on the list.


XNET IP Installer Ver XNET.AP-1.1.10.701
File Work
Num Camera Name Model name MAC Address IP Address Port
1 XNET_00TE8... TGB1110NF 00TE810000CT 192.168.123.100 80
Search complete

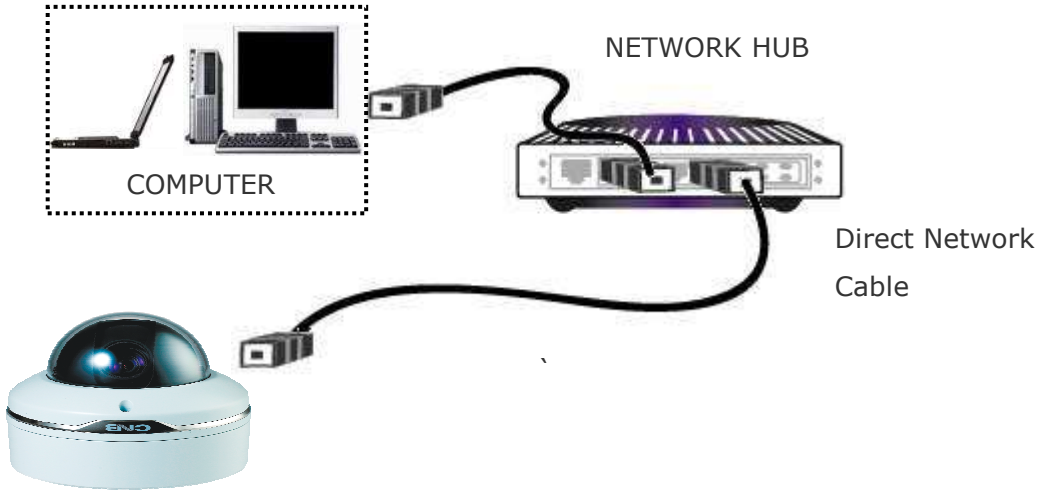
H. XNET camera is successfully connected to your PC.
(Internet Explorer will prompt you to install ActiveX.
In order to view video, you must accept the ActiveX download.)



NOTE: Please select Setting menu for XNET camera configuration.
If the login prompt appears, please enter User name and Password.
XNET camera's Default User name and Password
User name : root Password : admin

- **Connect XNET with a router**

Please connect XNET camera and PC to a router using LAN cables like below.



NOTE: If DHCP server is enabled at your router, XNET camera automatically receives an IP address from your router. Otherwise, XNET camera's IP address will be automatically set to the default value, 192.168.123.100.

3.2. Installing IP-Installer Software and Configuring IP address

3.2.1. About IP-Installer

A unique IP address has to be configured in order to connect IP camera and monitoring PC to a network. IP-Installer software provided in the Installation CD (included in the package and also available to download from our website http://**www.cnbtec.com**) will configure IP address easily. If your network have a DHCP server that automatically assigns IP addresses to IP cameras. If your network does not have a DHCP server, the default IP address of the device is 192.168.123.100. Refer to IP Installer user's manual for detail.

3.2.2. Configuring IP Address

A. The following box will appear when you start the IP-installer software.

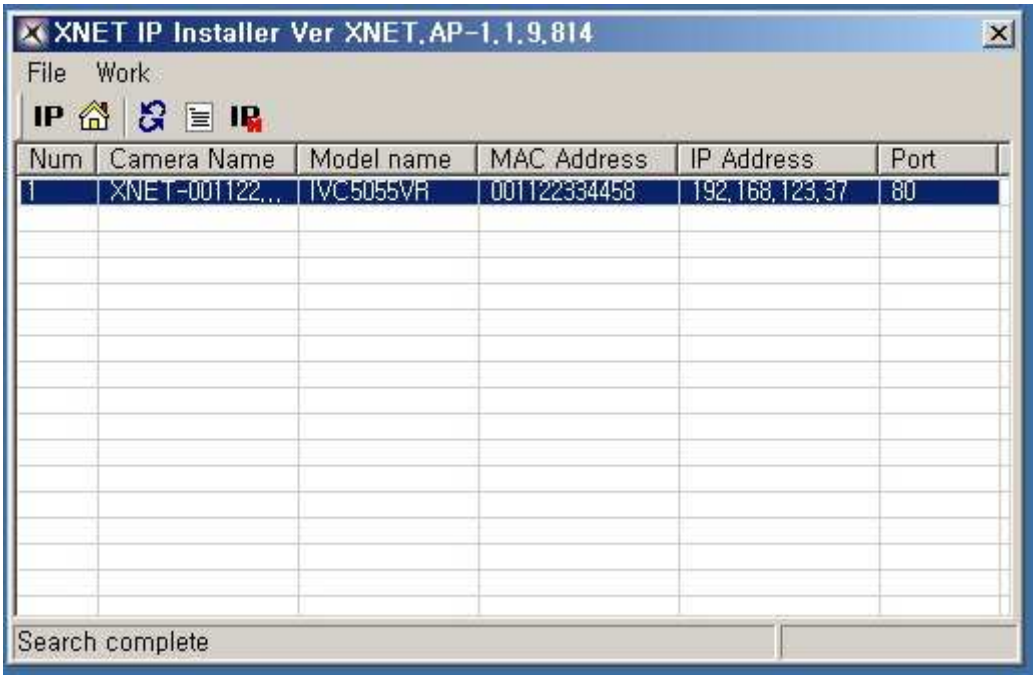


Figure 3-2. IP Installer Start box

B. Select the camera of which you wish to change the IP address and click **IP** (Set IP Address) button to bring up the following box in Figure 3-3.

Figure 3-3. IP Address box

C. When you enter the IP address and click Set button, the box shown in Figure 3-4 will appear.

Figure 3-4. Select Network Adapter Box

D. Select the adapter and click select button to change the IP address of the camera.

4. Using Web Viewer

Connecting to network devices can be done using internet web browser or "XNET-CMS" software. This guide explains about using internet web browser only. For instructions on how to configure network connection using XNET-CMS software, please refer to XNET-CMS Manual, which can be found in the installation CD.

4.1. Logging In

Enter the IP address of the device on the address bar of your web browser and press enter key. Then the following webpage will appear:

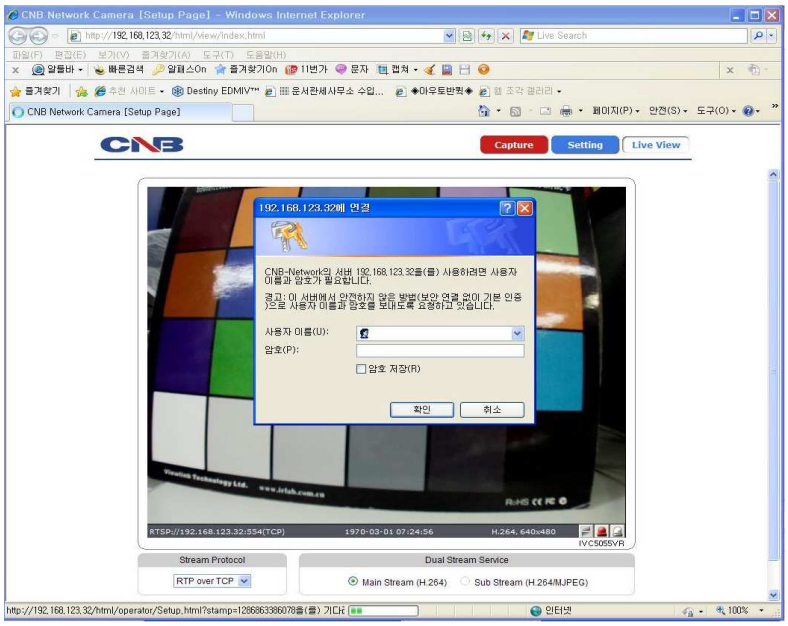


Figure 4-1 Log-in Box

Enter the user name and password to bring up the web viewer page. The default id and password is "**root**", "**admin**" respectively. If you want to use a different HTTP port number from the default value, simply put a colon and port number at the end of the IP address. (For example, enter the following address when changing the port to 8080: **http://192.168.123.100:8080**)

<Address format for accessing as an administrator>

(When using default IP address and port number) ***http://192.168.123.100***

(When IP address and port number changed) **http://IP *address: new port number***

	For security purpose, it is recommended to change the administrator's id and password from their default values. Please be careful not to forget them or expose them to others. Please refer to [**Web Viewer Manual]** for detail.
	If you forget the administrator's password, "Factory Reset" is the only way to regain access. However, since this will retrieve all default settings, you need to configure the network settings using IP installer software again.

4.2. Web Viewer Page

Web viewer page consists of Video monitor screen and menu option buttons.

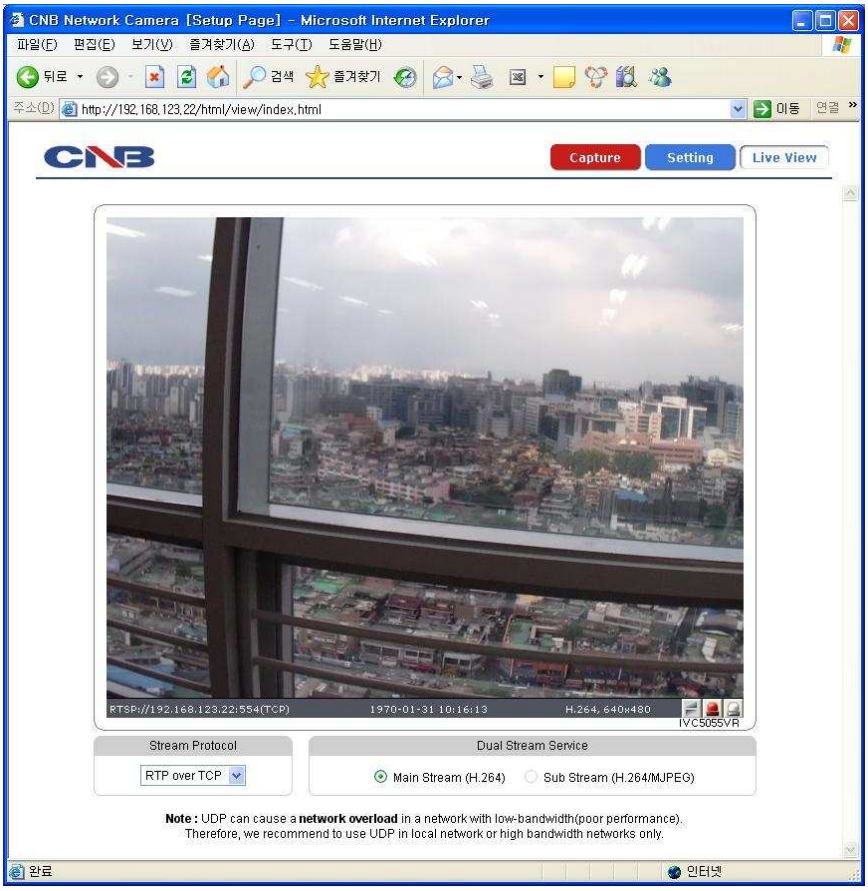
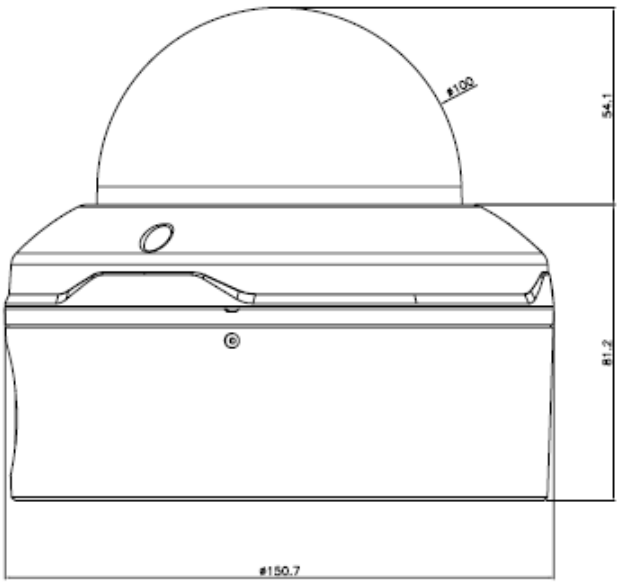


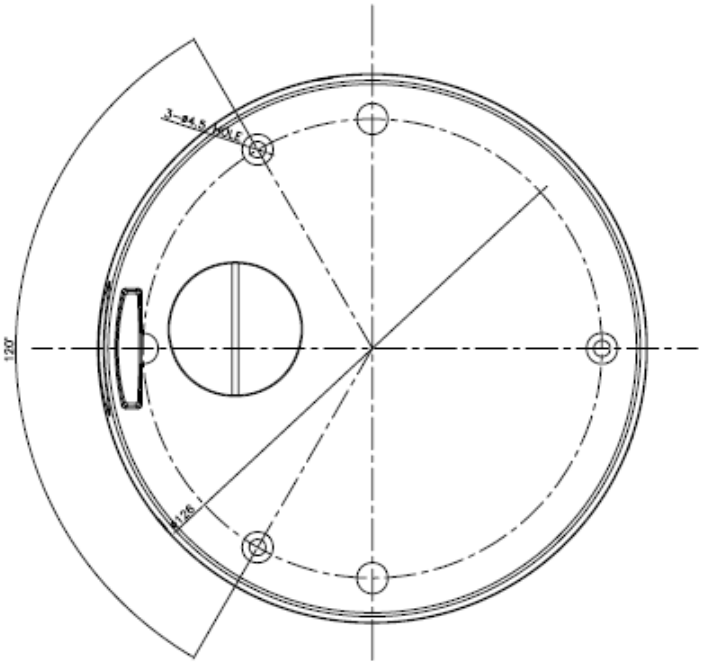
Figure 4-2 Web Viewer Page

Item	Sub Item	Description
Capture	-	Captures and saves the current image as a still picture. The image is saved as jpeg file in the following folder: C:₩xNetCapture
Setting	-	Brings up Menu screen. Setup page for each XNET feature can be opened from this Menu screen. **Please refer to [XNET Owner's Manual] for detail.**
Live View	Main Stream	When this box is checked, Main Stream Video is displayed.
	Sub Stream	When this box is checked, Sub Stream Video is displayed. Dual-Codec needs to be enabled in Video Setup Page in order for Sub Stream to be displayed. **Please refer to [XNET Owner's Manual] for detail.**

5. Specification

IVC5055VR		Specifications
Camera	Signal System	Progressive image processing
	Scanning System	16:9 Progressive
	Pixel Clock	80MHz
	Image Sensor	1/3" Progressive CMOS Sensor
	Sync. System	Internal
	Effective Pixels Number	1920 (H) x 1080(V) 2.0 Mega
	Horizontal Resolution	1100 TV Lines
	Video Output Level	Select NTSC/PAL 1.0Vp-p (BNC 75Ω, composite)
	Lens	Built-in DC Iris Vari-focal Lens, f=3 ~ 10mm, F 1.3
	Min. Illumination	0.8Lux (Color, DSS On), 0.00 Lux (IR LED On)
	IR LED and Sensor	850nm / 45° IR LED 18EA, Sensor 1EA
	IR LED Lighting Distance	Max. 15m
	Day & Night System	ICR(CDS Type)
	Back Light Compensation	On/Off
	Flickerless	On/Off
	White Balance	Auto/Manual
	Exposure	Auto/Manual
	Functions	B/W
	Electronic Shutter Speed	NTSC : 1/7.5 ~ 1/8000 (21 Step) PAL : 1/7.5 ~ 1/8000 (21 Step)
Video / Audio	Compression	H.264 / MJPEG
	Frame rate	Single Mode : Main(H.264@30fps) *1080p Mode : Main(H.264@30fps) Second(H.264@30fps/MJPEG) *Main(720p)/Second(D1)
	Resolution	Full HD(1920 x 1080), SXGA(1280 x 1024, 1280 x 960) 720P(1280x720), D1(720 x 480 / 720 x 576), VGA(640x480), CIF(352 x 240 / 352 x 288)
	Audio	Two-way (Full duplex / G.711)
Network	Protocol	Ipv4, HTTP, HTTPs, UDP, TCP, RTSP, RTP, SMTP, FTP, ICMP, DHCP, UPnP, Bonjour, ARP, DNS, DynDNS, NTP, IGMP(Multicast) *) OnVif
	Supported DDNS	1. CNB DDNS 2. DynDNS.org 3. Reference code with SDK
	LAN Interface	Ethernet 10/100 Base-T (RJ-45 Type)
	Support PoE	Standard IEEE 802.3af supported
Security	Access level setup	Multiple user access levels with password protection
	Network Security	IP Filtering
Alarm and Event Management	Image detection	Motion detection (Select 3 Regions - each area)
	Sensor detection	Sensor In, Scheduling, Alarm out
	Local storage	SD / SDHC card memory : Support size Max 16GByte
	After Event process	JPEG Image upload over FTP server / SMTP (E-mail server)
Applications	Browser	Internet Explorer 6.0 or later
	Monitoring Application	CNB NVR, CNB CMS and Utility (IP-Installer, etc)
Maintenance	System Upgrade	Firmware upgrade over HTTP
Mechanical	IP Class	IP67
	Operating Temperature	-20℃ ~ 40℃ with Heater(Night mode-IR led on)
	Pan/Tilt/Horizontal	4-Axis Movement for Free Lens Rotation
	Power	24VAC(24~28V)/12VDC(11~15V) Dual Voltage
		DC12V (Night mode-IR on)7W/ AC24V (Night mode-IR on) 10W
		DC12V Heater ON (Night mode-IR on) 9W
		AC24V Heater ON (Night mode-IR on) 13W
	Dimensions / Weight (Net)	150.7(Ø) mm


ø100
54.1
81.2
ø150.7


120°
ø126